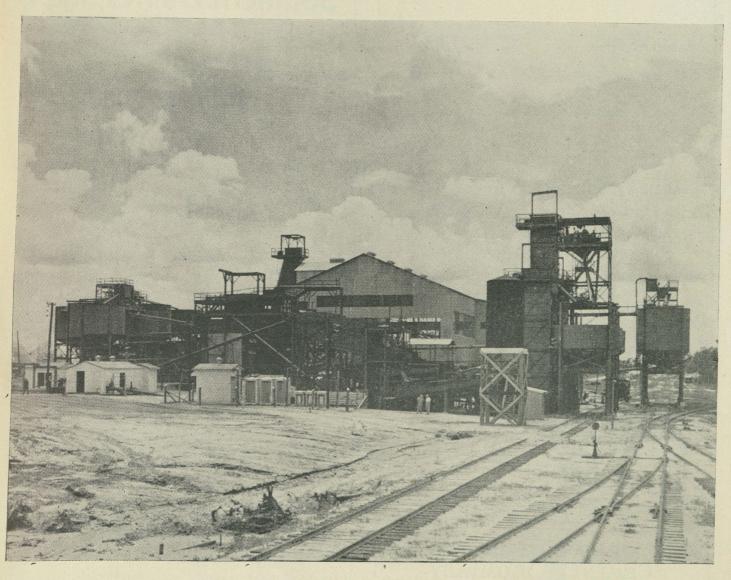


State Road Department of Florida---Florida Highway Patrol

VOLUME 11 NUMBER 2 JANUARY 1943



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PATROL'S EFFICIENCY IS DEMONSTRATED

BEST INDICATION of the effectiveness of the Florida Highway Patrol is the continued reduction of highway deaths and accidents since the patrol was reestablished on an adequate basis, J. J. Gilliam, director of the Department of Public Safety told the mid-Winter gathering of the Florida Sheriffs' Association in Orlando this month.

"We do not claim full credit for this lessening of the accident toll," he said. "We think we are entitled to a small portion of credit, if for no other reason than because we were on the job over the State."

Thirty to 50 percent reduction in deaths and in accidents in comparable calendar months points to the effectiveness of the Florida Highway Patrol system.

Gilliam, from his offices in Tallahassee, but mostly by actual contact with his highway patrolmen while they are on the job, directs the work of this group of men who number about 125. They are on duty daily and on call day and night in every county in Florida.

The patrol is chiefly interested now in traffic problems. Some of them are problems never considered by the average motorist. One of the biggest problems has to do with possible military contact between the armed forces of the United States and the Axis powers in Florida.

It is not that we are sounding the tocsin of immediate danger that this is pointed out, but it is well to realize that someone has figured out just what roads are to be used by fleeing civilians—and what roads are to be kept clear for our army en route to coming to grips with the invader.

For instance—in case the enemy should effect a bridgehead at Titusville—in what direction would you start to get out of the battle zone? You don't know? Well, in case this eventually comes to pass, you will find a uniformed Florida highway patrolman

on the job directing your personal line of "retreat."

"I have a fine group of men on the patrol," Gilliam said. "If they fail to come up to the high standard we set—they're out. Even the men put on, strictly on a temporary basis, pending return of regular patrolmen from service with the armed forces—hew the line. If they don't, they're out."

Gilliam is of the opinion that the knowledge of the fact that Florida highway patrolmen are on the roads causes drivers to be careful.

"You may hear that there is no traffic for the patrol to handle," he said. "That is in error. There is more traffic in Florida today than ever before. Traffic counts prove this. Our cooperation with traveling army units, getting them over the road, is one of our most important jobs now.

"Sales of gasoline over Florida—until this most recent restriction was clamped down—is almost up to average, figures reveal. The shortage in the usual Winter travel is more than made up for by army and navy movements. There is an infinitely greater number of actual gasoline sales, because the unit of sale is smaller—usually three gallons as compared with almost 10 gallons in prerationing days."

The Florida Highway Patrol has about 40 men in the armed forces. A small number of men left the force to accept jobs in other fields. Keeping the patrol up to strength and standard has been a problem.

Gilliam is of the opinion that present speed restrictions—35 miles an hour—has done much to educate the driving public against speed. He thinks Florida should have a speed law of 55 miles when conditions return to normal—and this should be a definite figure.

DECEMBER MOTOR ACCIDENT EXPERIENCE

These tabulations are obtained from reported accidents sent in by police officers and operators of motor vehicles, as required by the Florida regulatory traffic law. Additional tables of statistical traffic data may be obtained by applying to Department of Public Safety, Division of Florida Highway Patrol, J. J. Gilliam, Director, Tallahassee.

WHAT DID THEY HIT?

DID IIIDI I				
	—A	-Accidents-		
	Fatal	Dea	d All	
Total accidents	32	36	370	
Collision of motor vehicle	e			
with another motor ve	hicle 9	10	215	
Pedestrian	11	11	36	
Railroad train	1	1	7	
Animal-drawn vehicle			1	
Bicycle	2	2	8	
Animal (all types)			4	
Fixed object			6	
Overturned in road	2	2	7	
Ran off road	6	9	82	
Other noncollision	1	1	4	

WHEN DID THEY HAPPEN?

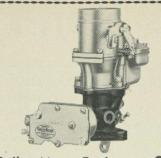
	-Accidents-		
	Fatal	Dead	A11
Total accidents	32	36	370
Monday	3	3	29
Tuesday	2	4	49
Wednesday	5	5	50
Thursday	6	7	71
Friday	7	7	64
Saturday	6	7	58
Sunday	3	3	49

WHAT TIME DID THEY HAPPEN?

	—A	-Accidents-	
	Fatal		
Total accidents	32	36	370
A. M.			
12-1	1	3	19
1-2			18
2-3	1	1	9
3-4	1	2	7
4-5	2	2	7
5-6	1	1	7
6-7			9
7-8	2	2	13
8-9	1	1	13
9-10			12
10-11			13
11-12			10
P. M.			
12-1	1	1	10
1-2	1	1	11
2-3	1	1	19
3-4			12
4-5			15
5-6	2	2	23
6-7	2	2	14
7-8	1	2	30
8-9	2 3	2 3	21
9-10	3	3	28
10-11	3	3	23
11-12	4	4	19
Not stated	3	3	8

WHY DID THEY HAPPEN?

WHI DID THEI HAFFEN:				
	Acci	dents		
	Fatal	All		
Total violations	30	450		
Driver had been drinking	4	72		
Driver fatigued or asleep	2	17		
Exceeding stated speed limit	11	114		
Exceeding safe speed	1	22		
Following too closely		14		
Disregarded signs and signals	3	42		
Failure to yield right-of-way		36		
Wrong side of road not in	_			
passing	/	68		
Improperly parked vehicle		6		
Improper start from parked		0		
position		8 4		
Improper passing		4		
Improper turning or failure to signal turn		13		
Improper lights	1	4		
Inattention or reckless driving	1	30		
		,0		
(Continued on page 29))			



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FLORIDA HIGHWAYS

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JANUARY 1943

NUMBER 2

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EDITORIALS

Food and Phosphate

FOOD WILL WIN the war, and the peace after the war. This has been so often said by those who should know that most of us have become willing to accept it as a fact although we cannot put from our minds the thoughts of slinking submarines, chattering machine guns, flying fortresses and the boys at the front who are actually wielding the bayonets of victory.

Napoleon was the first to say that an army travels on its stomach but this fact came near home in the last war when loss of it was threatened because of the lack of one little item, potash. It is true that potash is used for many other things—the manufacture of glass, drugs, soap, matches, black powder, high octane gasoline—but it is also true that 90 percent of all produced goes into fertilizer for farms which, without it, could not produce the grain and vegetables and the cattle, sheep and hogs needed to fill our granaries and larders at home and keep our armed forces and allies abroad in the field.

A National magazine recently stated that lack of potash, supplies of which were then controlled by German interests, came near losing the war in 1918, but that an abundance of it is helping to win this conflict. The statement was made in an article describing the mining of sylvinite, from which potash is extracted, near Carlsbad, N. M., an operation of the International Minerals and Chemical Corporation, which also operates in this State, and in the production of a mineral just as essential to farm fertilizers as is potash. This Florida operation is described in an article in this issue of Florida Highways.

Ordinary commercial fertilizer is composed of three ingredients—potash ammonia and phosphate—and the greatest of these is phosphate of which Florida produces three-fourths of the supply in this country. As most other deposits of phosphate in the world are in areas which are either controlled by the enemy or in actual war zones, it may be said that Florida is producing three-fourths, or more, of the world's supply at the present time. Superphosphate (treated rock phosphate) is the largest ingredient in all mixed fertilizers, according to the United States Department of Agriculture.

Foreign deposits of phosphate are located in places which might not have been familiar to the average person if their names had not cropped up so frequently in the communiques on war operations. One of the largest outside of Florida is in Morocco, another is in Tunisia, another in Algeria—all on the northern coast of Africa where the "second front" has recently been opened by the United Nations. Other deposits are located on Pacific islands, a large one on Nauru, midway between the Marshall and Solomon groups, another on Ocean Island, on the western fringe of the Gilbert group. Others are located on islands which were placed under Japanese mandate by the Versailles treaty as a measure to preserve peace, later secretly fortified by the Japs. Christmas Island, south of Java, was a supply for Aus-

tralia while Soviet Russia has deposits controlled by the State.

All of these deposits may be crossed off the production list for the duration. Deposits in the United States, aside from those of Florida, are located in 12 States but in most of them production peaks have long since been reached. Those in Utah, Montana, Wyoming and Idaho, may come into their own when they have devised means of mining phosphate which will reduce costs to the Florida level.

It is thus proven that Florida is doing something that is essential to the winning of the war aside from the actual production of fruits and vegetables, the furnishing of sites for training camps and sending her men and women to the armed and auxiliary forces. And the job is being well done. The corporation doing the work in the Peace Valley operation is one of seven now operating in the "pebble" phosphate fields in Polk and Hillsborough Counties. Others are operating in the rock phosphate fields in Sumter, Levy, Marion, Citrus, Gilchrist and Alachua Counties.

A paper issued by H. S. Martin and James Wilding, members of the American Institute of Mining and Metallurgical Engineers, says of Florida phosphate deposits:

"Deposits of phosphate occur mostly on the west of the longitudinal axis of the peninsula from near the northern end to somewhat more than halfway down. The largest deposits, beds of so-called "land-pebble" phosphate, occur in Polk and Hillsborough Counties, where they are extensively mined. "Hard-rock" deposits occur in more northern counties, the more prominent being in Marion, Citrus and Hernando Counties, 70 to 100 miles north of the land-pebble district.

"The land pebble deposits occur in an area about 30 miles long by 30 wide. They are unconsolidated or very slightly consolidated sediments that are considered to have been formed by the disintegrating and sorting effect of ocean waves acting on phosphate coastal rocks of an earlier period. In them are fossil teeth and bones of both land marine animals—sharks' teeth are common—indicating that the sediments have lain at some period under very shallow water (coastal swamps) and at another period have been submerged under considerable depth before being covered with their overburden of sand and clay.

"The phosphate beds lie almost horizontally, show distinct stratification and consist of a matrix of sand, clay and soft white crumbly phosphate mineral, in which are imbedded rounded and subangular fragments of harder phosphate, ranging in size from about two inches to fine sand. The pebbles form from 10 to 50 percent of the bed. The beds are from 3 to 18 feet thick and are overlain by loose or slightly cemented sand and clay, varying in thickness from a few feet to 40 feet or more.

"The hard-rock deposits are considered to be replacements of the calcium carbonate of limestone beds by phosphate dissolved out of (Continued on page 24)



FLORIDA FOURTH ESTATE

Taxes

Taxes, a topic that has been dry and of little interest to Floridians, are being dragged out into the open, thoroughly examined, and put to the test since Governor Holland and other State officials, as well as the several taxpayers' organizations of the State, have made citizens tax conscious. The fact that we have had to dig deeper into our pockets to pay more and more toward the winning of the war has added to the interest the average man is taking in how taxes are levied, who pays them, how they are collected and how the money is spent.

"Governor Holland has summarized in a few simple words the irrevocable link between equal taxation and the continuance of the democracy for which we are fighting—a link which every citizen must strive to maintain unbreakably strong." says the Tampa Times.

"'I don't know of anyone—whether on the front in the fighting forces or in civilian life—who is striking a more effective blow at morale-building than the tax officials who are doing their job and giving the citizens a clear, fair break,' the governor told the tax assessors of Florida in Lakeland.

"Taxation, at best, is a dry subject. But there is nothing dry about a tax structure that will let one taxpayer get by year after year without paying his taxes while another one, probably a better citizen, must pay more than his share under duress of losing his property.

"That, to a large extent, has been the situation in Florida—a situation that was sowing seeds of distrust in democracy. With his inauguration, however, Governor Holland launched an enlightened tax program which has brought Florida a long way on the road to tax equality. But much remains to be done.

"The governor told the assessors that the first two years had been the toughest for them because they had to revalue all property at full cash value and put it all on the books. Now, he added, the toughest work falls on the budget makers and the tax collectors."

In its comment on the governor's talk to the assessors, the Bradenton Herald stresses the value of lower intangible millage as an attraction to outsiders. "Addressing the convention . . . Governor Holland said the State would make greater progress in bringing people of means here to live by lowering the maximum millage that can be assessed against intangible property—a levy on stocks, bonds, money in the bank, etc.," says the Herald.

"While the governor is right about that, yet his suggestion if followed would not be as beneficial to the State as a whole as a general reduction of millage on real estate. True, the State government has no direct in-

terest in lower taxes on real property since it collects none for the State treasury.

"Presumably. Mr. Holland will make a recommendation to the legislature about a lower ceiling on taxing intangible property, but he would make a greater hit with far more taxpayers if he suggested a lower ceiling on millage collected on real estate. After all, this State does not collect an income tax such as many States impose, and which bears directly on people whose property is mostly of that kind which our law classes as intangible. Another way to describe such property would be to call it the 'hard to locate' kind. That is the way the tax assessors term it."

The governor's appeal for a lower ceiling on intangible tax millage is termed a plea that Florida "be careful to avoid killing the goose that lays the golden egg," according to the Lakeland Ledger.

"His contention," continues the Ledger, "is that the present high millage not only antagonizes wealthy individuals who come here from other States but also discourages them and dulls the edge of their enthusiasm for joining in Florida's civic and industrial enterprises.

"Although the governor did not say so with such bluntness, his plain inference is that Florida is exploiting the wealthy who are the very calibre needed to advance the welfare of Florida—wealthy individuals like those who are attracted to the Miami and Palm Beach areas and who become interested in shifting their residence to Florida.

"The governor's expression reflects a growing sentiment among many of Florida's leaders, and so it is probable that the matter of lowering the ceiling will be presented at the next session of legislature."

Complaining of high tax assessments in Dade County (\$513.975), compared to Duval (\$168.964), Hillsborough (\$43,-758), Escambia (\$9.469), Orange (\$46,-264), and other counties, the Miami Herald voices the wrath of Tax Assessor J. Newton Lummus, Jr., who zealously followed the law, while, he says, "no one can convince me that any concentrated effort is being made to collect intangibles in Polk and Orange Counties," and other counties. The Herald maintains that the intangibles tax was "pointed directly at this (Miami) area."

"The whole structure of Florida economics—assessing, taxing and collecting—is outmoded, discriminatory and impotent before the complexities of modern living and unsuited to the development and immediate potentialities for expansion of the progressive areas of Florida," says the Herald. "Only a constitutional convention can remedy the incapacities and the inequities under which the advancing sections of the State labor."

The Miami News, terming the program presented by Tax Assessor Lummus at the

State conference in Lakeland "a thoughtful program," declared that it is worthy of serious study. (This program, presenting nine essential points, including the suggestion of a tax commission, has been widely publicized in the press.) Recognizing the need for further improvement of the tax program, the News continues:

"It can be seen that they (Mr. Lummus' suggestions) are designed to close loopholes, approach uniformity, simplify administration, increase revenues while reducing the cost of collection, and assure a fairer share of the tax cut back to the heavy taxpaying counties. There are disinterested and informed men in the legislature capable of weighing the proposals and devising action on them. The governor, fortunately, is a man extremely well versed in the principles and practices of taxation and finance. Already he has put through the legislature extensive reforms that have put the State on a sounder fiscal basis than ever before. Mr. Lummus' proposals will doubtless receive the careful attention of Governor Holland."

Proposals of the Florida Taxpayers Association, which approved an 8-point program to be submitted to the coming legislature at a recent meeting in Tampa, have received various comment in the press of the State. (In addition to recommending a State tax commission, this program would combine city and county assessments in one office, abolish the fee system for counties of over 100,000 population, elect county commissioners at large, abolish justice of peace courts in large counties, abolish special tax collection attorneys, advertise delinquent property on a business basis and permit installment payment of current or delinquent taxes.)

"We think the program is good with the possible exception of the first one (tax commission), says the Highlands County News. "We think at least three commissions should be eliminated every time a new one is created."

The Palatka Daily News explains a method being organized in Putnam County for the collection of taxes which is likely to prove interesting to officials of other counties. The News' editorial follows:

"With Governor Holland and Comptroller Lee definitely behind a program for the collection of delinquent taxes, the era of the tax dodger seems to be drawing to a close. For many years Florida residents were encouraged to evade payment of taxes, secure in the knowledge that if they held out sooner or later the legislature would adopt a tax forgiveness measure such as the Murphy act and let them escape almost scot free, the whole time more conscientious individuals were paying not only their share of the tax load but that of the man who didn't pay.

"The county commission of this county (Continued on page 28)

CAPITAL CHATTER.

SUPT. L. F. CHAPMAN, of the State Prison Farm has reported to the State cabinet a shortage of manpower due to the prison population dropping from around 2,000 to 1,500. He will be able to furnish but 15 to 20 men for State Road Department camps, he said.

"Most of the men now coming to the prison appear to be physically unfit for service in the armed forces," Chapman said. "They also are unfit for industry and are not suitable for highway work."

Chapman looks for a sharp wave of crime following the war and is making his plans accordingly.

Seven hundred and seventy-six teachers resigned their positions and withdrew their contributions to the teachers' retirement fund between January 1 and November 1, according to Colin English, State Superintendent of Public Instruction. It is the war, and they are earning much more money in war industries than they can in classrooms. Some, however, have joined the armed forces.

Superintendent English stated that since the State started receiving contributions to the retirement fund January 1, 1940 a total of \$106,320 has been refunded to 1,595 teachers who quit their jobs. More than 13,000 teachers are participating in the plan and the fund now amounts to nearly \$2,-000,000, most of it invested in U. S. government bonds. Pension rolls include 250 retired teachers who draw an average of \$34 a month. Teachers may retire at 60 and have to quit the job at 70 years.

* * *
Nathan Mayo, Commissioner of Agriculture, recently stated that Florida exceeded all of its agricultural goals in 1942.

"We are going to repeat that achievement aside from the dairying and poultry business," he said, declaring that a shortage of milk and dairy products is likely this year. Increased labor and feed costs have caused the closing of 63 dairies in the State during the last year.

"Young farm workers," said the commissioner, "should be proud of the fact that they are helping to win the war. They are not inferior to men in the armed service and should be identified by some insignia showing that they are doing their part."

Tallahassee has a housing shortage. Capt. Joe C. Hickman, ordinance service, recently told the Chamber of Commerce that non-productive workers and their families should move to other cities in order to provide living quarters for those who are engaged in essential war work. The several big army posts near the city make Tallahassee a weekend and leave center and hundreds coming to visit soldiers are frequently without places to stay. The Chamber of Commerce has urged the opening of private homes to visitors.

The supreme court is considering a plan advanced by Thomas H. Gurney, Orlando, president of the State Bar Association, which would permit the court to hear oral arguments in cities distant from the capital and save attorneys making long trips during the transportation emergency.

The proposal has the backing of the executive committee of the bar association which holds that it can see no legal barrier to the court sending members to other cities for hearings. The court, of course, would not hold full sessions outside of Tallahassee and all orders and opinions would be delivered here.

Since the ruling of the supreme court that slot machines which offer free plays are illegal Governor Holland has issued a statement in which he says that he expects the sheriffs to "go the whole way" in banning

these devices.

"The ruling means that it is just as unlawful to operate a slot machine or other coin-operated device when a free play is the only reward or prize as it is to operate a machine which pays off coins," said the governor. "There shouldn't be any difficulty in getting evidence, now."

"We know we're going to win the war, but the thing that most concerns us is that we win the kind of world that you are entitled to enjoy," said U. S. Senator Claude Pepper to a group of 20 soldiers representing 11 nationalities who took their oath of citizenship in U. S. court here last month.

* * *

Senator Pepper, former law partner of Federal Judge C. L. Waller, who issued the oath, made a surprise visit to the session, while on a visit to his home here.

* * *

The Army and Navy should come first, said Commissioner of Agriculture Nathan Mayo in advising Florida egg producers to give the services preference over civilian markets during the present shortage of eggs.

At the same time he asked poultrymen to make a special effort to produce a larger number of eggs for the market, declaring that it is a patriotic duty to help keep our armed services in the best of fighting trim.

George Crawford has been appointed to the office of clerk of the Leon County circuit court to fill the vacancy caused by the death of Paul V. Lang, who died at his home here January 2.

Lang first became clerk of the court in 1917, being reelected without opposition each four years since. He was a native of Cedar Key.

Joe H. Dixon, formerly connected with the State Highway Patrol, died in an Ocala hospital last month. He had been operating a hotel at North Hammock. Air raid wardens have no authority to enter buildings to turn out lights during a practice blackout, but they may do so during the real thing, according to an opinion of Attorney General Tom Watson given to Maj. Gen. Albert H. Blanding, head of the State Defense Council action divisions.

Those who do not cooperate in practice blackouts should be reported to the local defense councils. Watson said.

* * *

"Another fiasco in a comedy of errors," was the declaration of Governor Holland following OPA's December order in further restricting the use of gasoline in Florida. The governor has opposed rationing measures in this State from the beginning, maintaining that the fuel can be obtained here without disrupting National transportation lines.

* * *

Governor Holland has accepted the retirement of Circuit Judge Worth W. Trammell, Miami, effective March 31, and he will become the first judge to retire under the 1941 legislative act which provides for the retirement of circuit judges who have served continuously for 12 years and are more than 60 years of age.

* * *

State employes received their checks on December 31, day before the new Federal victory tax went into effect. The payroll payday has been the last day of the month instead of the first day, so no change was necessitated. The victory tax of five percent will be deducted by the comptroller from January checks.

Fred Morris, Miami, has been named by overnor Holland as State labor inspector

Governor Holland as State labor inspector succeeding T. H. Hutchinson, Lakeland, whose term has expired. Morris was a safety inspector for the State Industrial Commission and is vice president of the State Council of Carpenters. His salary is \$2,400 a year, plus traveling expense.

* * *

County tax collectors may hold up beer dealers' licenses unless valid municipal fees also have been paid, according to a decision of the supreme court. The decision was made in the case of the Seminole County tax collector who declined to license a dealer who had not obtained a city license in Oviedo.

* * *

Bills filed in the comptroller's office up to December 1 were paid from the general revenue fund on December 23. Payments totaled \$359,000. It was said that heavy Winter payments of licenses and other revenues will exceed monthly requirements.

* * *

Fleming H. Bowden, Mandarin, member of one of Duval County's oldest families. has been appointed county supervisor of registration to fill the unexpired term of Emory H. Price, who was elected to congress from the second Florida district.

George A. Dame, New Port Richey, has been appointed justice of the peace of District 2, Pasco County, to fill the unexpired term of Judge John G. Snell, veteran justice who resigned because of ill health.

Florida Highways herewith presents, in cooperation with the Florida State Chamber of Commerce and the War Services Section of the WPA, the second prize-winning story on Florida by a member of the armed forces training in the State. The contest was launched several months ago and response was so great that judges were swamped. First prize, a \$50 war bond donated by the State Chamber of Commerce, was won by Corporal Felix Leon of the Finance Department, Army Air Forces Flexible Gunnery School at Tyndall Field, Panama City. He sent his bond to his mother, Mrs. Sadie Leon, 2200 Grand Avenue, New York City. Presentation was made by President Walter C. Sherman, head of the State Chamber. The story appeared in the December number of Florida Highways.

FLORIDA . . .

I

ON THE WAY down the coast to our training center at Miami Beach we skirted most of the important cities of the East. The North went by in a kaleidoscope of roaring industry, dingy railroad sections, and in the distance, the business districts-noisy and crowded. We came through Washington in the afternoon, emerging suddenly from dark tunnels to find ourselves moving through the decrepit colored section, with the sunlight flashing on the nearby orderly ranks of white buildings, simple and functional, slitted by colums of windows, through which office workers peered at the slowly moving troop train. We gaped back. We were Americans moving to a job, and this artificial city, this coastal panorama we were surveying, meant something enormously important in that job. Our perceptions had a unity now. We were trying-consciously or subconsciously-to find the indivisibility beneath all these scenes, this life. So new eyes gazed questioningly from Pullman windows as we moved down the coast of the new world until we came to Florida.

The hills of Virginia and the Carolinas unrolled into the marshy, sandy coast of Georgia, and night fell. We awoke in Jacksonville. And now we moved through a radically different environment. The climate, growing warmer throughout our trip, seemed to assume a new intensity. Or perhaps is was the new openness composed of sandy wastes, with a fringe of trees in the distance, and a concave brilliance of the blue sky overhead.

A new quality pervaded the landscape. All of us felt it, and even the card players paused in their game. This desolateness, nostalgic and mystic, with an ocean and bleached sand dunes on one side, and the interminable, sparse forested distances on the other, profoundly affected us. We were quiet. But we were young, and the great unknown lay before us, and soon we were gossiping and guessing about our new adjustments ahead. The train carried us slowly, in a trance, from the known world, into this garish, silent peninsula pointing southwards toward tropic seas. We were in Florida.

We arrived in Miami in the late afternoon. Piled into a bus we were whisked along the shore front where aquamarine Biscayne Bay slapped green, whitecapped waves against the jetty, and the icy skyline of downtown Miami stood starkly outlined in the blue twilight. It had just rained and

By Corp. Samuel Dunkell

28th Base H.Q. and Air Base Squadron 21st Bomb Group, 314th Bomb Squad, MacDill Field, Tampa.



Samuel Dunkell was born at Paterson, N. J., in 1919 and lived for the past 16 years in Brooklyn, where he attended Brooklyn College, majoring in psychology. Inducted into the Army in the spring of 1942, before he had completed his course, he continues his studies through the extension facilities of the University of Florida to qualify for his B.A. degree.

Dunkell trained for six weeks at Miami Beach, and has been at MacDill Field since early July. He was promoted to rank of corporal in September, and is now Link trainer instructor, teaching instrument flying.

He is particularly interested in the "Gestalt" School of Psychology and in group relationships, and has applied for officer training in psychometrics and personnel, where he can apply his knowledge of psychology to effective use by scientific grouping and placing

He has never written for publication,

the air was cool, with enormous white clouds bellying above.

We crossed the causeway and reached Miami Beach just before dark, squeezed out of buses, and lined up in a dusk-stained fairyland. All about were the modernistic shops of Lincoln Road—our first intimate introduction to the flat, white roccoco architecture of Florida—standing out ghostly pale in the blackout. The sharply defined clouds were touched by the last rays of the lowering sun. Fragile heat lightning flashed at intervals, and the wind stirred the fronds of the royal palms.

We marched through the darkened streets, my "GI" shoes squeaking in the exotic stillness, until we were trundled into the vague blackness of our hotel and sent upstairs to bed. The room was dark, illuminated faintly by a moon—nearer, larger, and more delicately silvered than ever before. The palms bent gravely with the wind, and the subdued roar of surf sounded in our ears.

Our heads were spinning after the long train ride, and turning and tumbling in the vortex was a confusion of impressions—new sights and sounds—a confusion of ideas and experiences all floated in a whirling blur of palms, burnished suns, bitter blue ocean, flat, dry lands, swamps, and belching foundries. All this was America. Yet no unity emerged from this puzzling diversity; and now this bizarre landscape, this home of paradox, made all order and logic seemingly hopeless. Well, the tomorrows held new surprises. Perhaps we could find the key then. Right now we were so sleepy.

II

Since that first transcendental evening I have had time to observe the entrancing paradox that is Florida. I've seen beneath the soft pastels and easy comfort that is Miami, and most resort cities, to the basic unstable harmony that makes up a State of unchanging transitions—her turnabout climate, her southern north and northern south, the porosity of her limestone base, spongy with lakes and bubbling with springs in the center, and the ocean and gulf eating at her crust.

Here is a land where exoticism is discreet. (Continued on page 24)

but developed ease in writing through preparing notes and sketches in his school work. He intends to take a writing aids course through the extension facilities of the University of Florida.

To secure the necessary information for his article, Dunkell consulted the State office of the WPA Defense Fact Finding Phase, the Tampa Public Library, and the Florida Guide, at the MacDill Field library.

International's New Phosphate Mine and Recovery Plant in the Florida Pebble Field

Editor's Note—Florida Highways, by special permission of the Engineering & Mining Journal, herewith reproduces an article by A. H. Hubbell, associate editor, on the International Minerals & Chemical Corporation's Peace Valley phosphate mine near Mulberry. Phosphate is one of the minerals vitally needed for the successful prosecution of the war, as is potash, recently featured in a Saturday Evening Post article on International's operations near Carlsbad, N. M. Illustrations with the article are by courtesy of Engineering & Mining Journal.

By A. H. Hubbell

Associate Editor, Engineering & Mining Journal

HOSPHATE MINING and washing in the pebble field of Florida, which for years has yielded the larger part of the phosphate rock produced in the United States, were described at some length in Engineering & Mining Journal* beginning in the issue of September 1940. Then, as now, seven important companies were busy in this area. In the two years elapsed, despite altered economic conditions growing out of the new World War, the general picture of the Florida industry has remained much the same, though some change in its details has taken place. New tracts of ground have been opened from time to time to replace older tracts as the latter have become exhausted. Important new construction has been accomplished, older plants have been transferred to new sites, and modifications effected in mining and treatment practice. Some of these happenings have already been dealt with in print.* Others remain to be. This article concerns itself in the main with the new Peace River Valley mine and its washer and recovery plant, that have recently been placed in production by International Mineral & Chemical Corporation, formerly known as the International Agricultural Corporation, or the "I.A.C.

International's executive office is in Chicago. Its president, Louis Ware, is a mining engineer and he has taken an active interest in the Peace Valley operations. In charge of the phosphate division of the corporation is one of its vice president, Franklin Farley. James A. Barr is the

Phosphate mining gets under way at the new unit. One of the electric draglines serves for stripping, the other for digging the uncovered matrix and piling it on the bank where it is sluiced into a sump and pumped to the washer.



Peace Valley washer (right) and new No. 6 flotation plant (center). In the foreground running up to plant is part of the reservoir. Water is supplied partly from Peace River, partly by the deep well seen discharging near the center of the picture. See cover page.



Pumping water to the reservoir from a ditch running up from Peace River 1,600 ft. away.

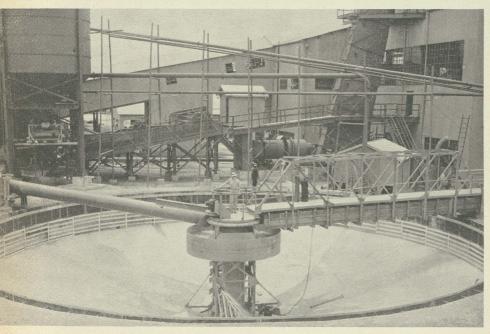
* "Phosphate—The Vital Non-Metallic," by A. H. Hubbell, E. & M. J., Sept., Oct., Nov., Dec. 1940.

† "Southern Phosphate's Electric Load Now 6500 Hp." By J. H. Edwards, E. & M. J., Dec. 1941. Also "Electrostatic Separation Scores Advance in Phosphate Recovery." By Herbert Banks Johnson, E. & M. J., March 1941.

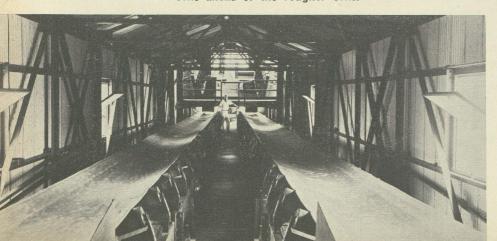
As flotation plant No. 6 was ready to start. In the foreground is the 40-foot hydroseparator, which is receiving the overflow from the table feed bin, and behind it to the right, under the canopy, are the Fahrenwald sizers. To the left is the duplex classifier.



This 75-foot hydroseparator receives the overflow from the 40-foot unit. Beyond it, in proper series, are the duplex classifier, rotary mixer, and elevator that precede the tables in the flowsheet.



The two 36-inch belt conveyors that deliver the flotation feed to the mixer cells ahead of the rougher cells.



chief engineer. Operations at the plant are supervised by R. B. Fuller, resident manager, and F. B. Bowen, mine superintendent.

Thanks are due the company and the officials named for permission to see the mine and plants and obtain the data and illustrations presented here. The recent visit was made under the escort of Mr. Fuller, who also provided the flowsheets used and all save one of the photographs shown.

Recognized as the largest producer of phosphate rock in the United States, the International owns in fee some 40,000 acres in Florida centering at Mulberry, in the pebble phosphate field, 40 miles from the Gulf Coast, having acquired the land by purchase from private owners. Here its wholly mechanized (and electrified) operations employ approximately 350 men.

During the last two years or more, and up to July 1, the company's production of rock has come from two mines, Nos. 12 and 92, respectively, and a débris*

* In the phosphate mining industry it is customary to use the term "débris" for the reject from the washing plants, and the term "tailings" for the reject from subsequent treatment in flotation or "recovery" plants.

Peace Valley Mine Deep-Well Samples

		amples		
Depth	Analysi	is in Perce	entage	
Ft.	B.P.L.	I. & A.	Ins.	CaCO ³
10	14.19	8.85	79.57	6.85
10-20	38.17	4.60	51.18	2.51
30	58.10	3.38	14.17	16.77
40	38.39	5.14 3.34	30.14	14.29 20.77
50	22.86 21.72	1.95	20.94	31.07
70	17.61	1.42	25.90	31.34
80	14.09	1.46	24.54	33.91
90	9.43	1.43	21.26	38.40
100	9.40	1.02	11.93	45.65
120	7.67	0.95	14.06	44.85
130	7.66	3.68	35.19	27.00 53.47
140 140-150	1.56	0.64 2.93	3.75 52.31	28.28
150	2.24	1.03	10.24	49.45
150-160	3.66	1.73	56.53	27.95
160	2.13	1.64	63.94	25.89
160-170	1.73	1.37	33.15	37.74
170	.2.53	1.40	29.21	60.00
170-180	5.23	2.67	53.20	33.30 91.62
180 180-190	0.90 2.86	0.32 3.17	5.05	17.61
190	2.80	2.25	41.52	33.96
200	5.87	1.19	54.13	25.38
200-210	0.20	0.18	4.96	92.62
210	5.37	1.43	47.02	28.05
210-220	0.50	0.34	9.72	86.70
220	1.51	0.33	9.25	85.19
220-230	0.10	0.18	3.10	95.39 87.83
230 240	1.21 0.70	0.44	6.08	91.89
240-250	0.20	0.26	3.30	94.67
250	0.60	0.16	4.25	93.05
250-260	0.20	0.22	3.32	94.33
260	8.51	2.00	44.16	38.24
260-270	0.20	0.21	2.50	94.99
270	0.70	0.37	4.56	92.71
280 280-290	0.50	0.26 0.35	2.51 4.75	94.96 92.89
290	0.80	0.39	4.01	92.33
290-300	0.00	0.21	7.60	90.46
300	0.50	0.54	4.84	92.31

FLORIDA HIGHWAYS

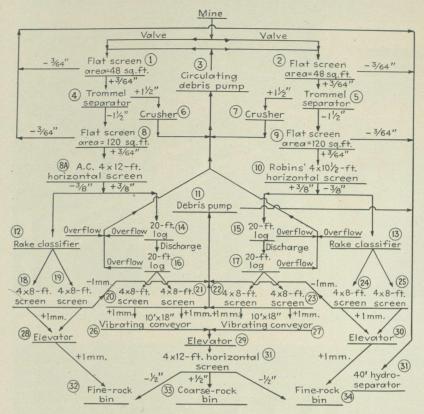
dump, the last at Pembroke, near Fort Meade, in the southeast corner of the active portion of the pebble field. This dump resulted from washing operations in this area prior to 1930, partly by the Coronet Phosphate Co., and partly by the Pembroke Chemical Co. The latter had purchased a considerable acreage of high-grade phosphate lands, including débris, from the former company, and thereafter operated a small washer of its own. About 1932 International acquired these débris dumps, from Pembroke on a royalty basis and proceeded to mine them by suction dredge and to re-treat the material in a flotation recovery plant (No. 4) erected by its subsidiary Phosphate Recovery Corporation. Another year will see the completion of this project, which has yielded a large tonnage of phosphate running approximately 77 percent B.P.L., won from the minus-14-mesh sizes which had been thrown away in the earlier washing operations before flotation entered the field.

Meanwhile, the Pembroke company, pleased with the high recoveries made by International, proceeded to lease to the latter company some of

LEGEND, FIG. 1

- 1 and 2. Each is a punched-plate screen, 3/64 x 1-in. openings. Long dimension of slot parallel to flow. Slope 3 in. to 1 ft.
- 3: Allen-Sherman-Hoff 10-in., D-frame, Hydro-Seal pump; 150-hp. G.E. induction motor
- 4 and 5. Each is a 4 x 12-ft. G.I.W. (Georgia Iron Works) Mudball Separator; 5-hp. Allis-Chalmers motor and Falk Motoreducer
- 6 and 7. Each is an 18 x 24-in. McLanahan-Stone single-roll crusher with anti-friction bearings; V-belt, 15-hp.

Fig. 1 . . . Flowsheet of Peace Valley phosphate washer. The plant is designed to handle 350 to 450 cubic yards of matrix per hour.



Allis-Chalmers motor

- 8 and 9. Each is a punched-plate screen, 3/64 x 1-in. slotted openings; slope 2 in. to 1 ft.
- 8A. 4 x 12-ft Allis-Chalmers horizontal vibrating screen, 3/8 -in. square openings; V-belt, Allis-Chalmers 5-hp. motor
- 10. 4 x 10½ -ft. Robins horizontal vibrating screen, ³/₈ -in. square openings; V-belt, 7½ -hp. Allis-Chalmers motor
- 11. 6-in. G.I.W. top-discharge, centrifugal pump, 50-hp. G.E. induction motor 12 and 13. Each is a 30-ft. duplex Dorr
- 12 and 13. Each is a 30-ft. duplex Dorr classifier; V-belt, 10-hp. Allis-Chalmers motor
- 14 to 17. Each is a 20-ft. G.I.W. double log, corrugated cast-iron blades; 30-hp.

- Allis-Chalmers motor and Falk Motoreducer
- 18 to 25. Each is a 4 x 8-ft. Tyler screen, equipped with two "V-50" Hum-mer vibrators, operated from Tyler Thermionic power converters.
- 26 and 27. Each is a 10 x 1½-ft. Jeffrey vibrating pan conveyor, operated from a motor-generator set
- 28 to 30. Each is a 16-in. Republic belt elevator, 8 x 14-in. Link-Belt buckets, chain-driven from 10-hp. Allis-Chalmers motor and Falk reducer. (No. 29 driven by 15-hp. motor)
- 31. Screen, same as 8A, save that openings are $\frac{1}{2}$ in. square
- 32-34. Bins, capacity each 100 tons



R. B. Fuller, manager of International's Florida operations, in the center. F. B. Bowen, mining superintendent, right. R. C. Russell, traffic manager, Chicago office of the company, left.

Louis Ware, president of International Minerals & Chemical Corporation (left-hand portrait)

Franklin Farley, vice president in charge of the company's phosphate division (center portrait

James A. Barr, chief engineer of International, with headquarters in Chicago (righthand portrait)

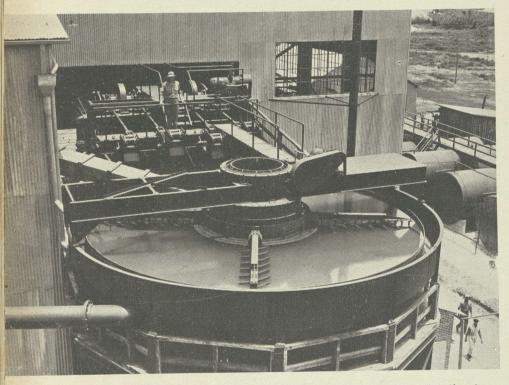




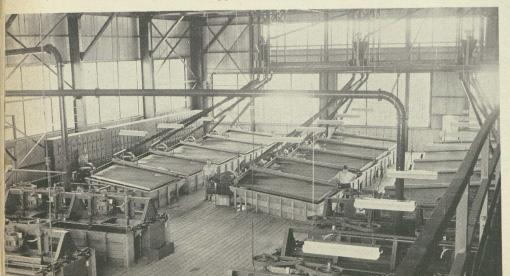
Rougher flotation machines, six banks of 54-inch air-flow cells.



Quadruplex bowl classifier, the rake product of which is fed to cleaner flotation machines.



The 15 No. 6 Diagonal-Deck Super-Duty tables on which flotation by agglomeration is conducted



its virgin high-grade phosphate land, the leased tract totaling several hundred acres. On this ground, about a mile from Pembroke, International has established its new Peace Valley unit. Here mining, washing and subsequent flotation of phosphate have been in progress since July 1, 1942. The washer is the one which formerly served No. 92 mine. Dismantled and transported to its new site, it was reerected ahead of the new flotation plant and now operates on a somewhat different flowsheet. The flotation or recovery plant is entirely new. Drawings for the entire job were begun in August 1941, and ground was broken in December. Mining has begun within a short distance of the plant.

Capacity of the plant, in terms of output, is rated at 2,500 to 3,000 tons of finished product per 24-hour day. The flotation plant alone will turn out as much as 95 tons of finished product per hour when some good sections are being worked. The washer is capable of handling 350 to 450 cubic yards of matrix per hour.

For the new plant a site was chosen on the edge of a swamp and approximately one mile north of Pembroke. It is said to be the only unminable land on the tract. The intake at the washer, where the matrix pumped from the mine is received, is only 5 feet above the center of the mining pump. As mining progresses, the distance from mine pump to washer will vary, the maximum being about 4,700 feet.

Large amounts of water are required for operation, 18,000 g.p.m. being delivered to the sump at the plant from the Peace River and an additional 6,150 g.p.m. from a new 810-foot deep well sunk close to the sump. Water for mine operation, amounting to 4,000 g.p.m., comes from the sump.

The river water is taken from a ditch (shown in a photo, p. 11) 1,600 feet from the river by means of a pump installation consisting of two Allis-Chalmers 16x16 inch type SF pumps operated by an 850-hp., 2,200-volt, synchronous motor. Refuse is kept out of the intake by a triple layer of hog fence. These pumps lift the water 26 feet through a 26-inch diameter line and canal to the 700,000-gallon concrete-lined sump close to the plant. Analysis shows this river water to contain a trace of tannic acid.

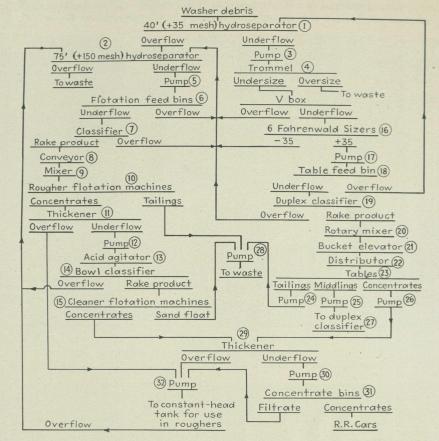
Driven by the Layne Atlantic Co., the deep well is equipped with a 16-inch Layne & Bowler turbine pump. The pump impeller is 44 feet below the top of the casing. The well casing is 20 inches in diameter for the first 75 feet, then 18 inches for 225 feet to suitable rock foundation, and, below this, 17½ inches to the bottom at 810 feet below the surface. Water level is 23 feet below the top casing. After a continuous five-hour test,

pumping at the rate of 6,000 g.p.m., the estimated drawdown was approximately 16 feet. This well, which is shown in an accompanying picture in its relation to the plant, is situated 200 feet east and 550 feet south of the northwest corner of the SE 1/4 of the NW 1/4 of Sec. 10. Tp. 31S., R. 25E.

Throughout its entire depth of 810 feet, the hole was sampled at 10-foot intervals and the samples were analyzed for B.P.L.* content, iron and alumina ("I.&A." in the trade), insoluble, calcium carbonate, magnesium carbonate, and CO2. Fluorine and minor constituents were not determined. The record provides an interesting geologic cross-section of the ground in the vicinity of the hole. The first sample, at 10-foot depth, showed 14.19 percent B.P.L. (6.50 percent P2O5); 8.85 percent I.&A., 79.57 insoluble, 3.84 CaO, and 0.15 MgO. Below this point the B.P.L. content rose to 58.10 percent at 30 feet, falling thereafter to 38.39 percent at 40 feet, to 22.86 percent at 50 feet, to 9.43 or less below 90 feet, to less than 5 percent below 130 feet (with three exceptions where it rose slightly) and to less than 0.20 percent below 300 feet (save for three minor variations). In only two of the samples did the iron and alumnia exceed 4 percent. Below 260 feet the calcium carbonate exceeded 90 percent and 95 percent below 360 feet. The analyses are given down to 300 feet in the accompanying table. The magnesium carbonate may be obtained approximately in each case by difference. This well is the twenty-sixth deep hole put down by International on its Florida holdings.

International's mining practice has undergone an important change since the then current method was described* two years ago. Stripping is still done with draglines, but hydraulic mining has given way to socalled dry mining, which was then the subject of experimentation. Formerly hydraulic giants delivered large volumes of water at pressures of 180 pounds to 225 pounds per square inch against the working face to dig the matrix, sluicing it into a sump nearby, from which it was picked

Fig. 2 . . . Flowsheet of Peace Valley flotation plant (No. 6), handling 300 tons of feed per hour. There are two sections for flotation roughing.



- 1. 40-ft. Dorr hydroseparator; V-belt, 10-hp. Allis-Chalmers Motoreducer
- 75-ft. Dorr hydroseparator. driven from 10-hp. Louis-Allis motor and Falk Motoreducer
- 3. 8-in. Georgia Iron Works top-discharge centrifugal pump. V-belt, 75-hp. G.E. induction motor
- 4. 4 x 12-ft. G.I.W. trommel, 3/16-in. screen openings. Chain-driven from 10-hp. Allis-Chalmers motor and Falk Motoreducer
- 5. 8-in. G.I.W. top-discharge centrifugal pump, direct-connected to 150-hp. G.E. motor
- 6. Six bins of 1,800 tons' total capacity
- 7. Type FX Dorr quadruplex rake classifier; V-belt, 25-hp. Louis-Allis motor and Falk Motoreducer. Two classifiers
- 8. 36-in Republic belt conveyor, chain-driven from 25-hp. Allis-Chalmers motor and Falk speed reducer. Two convevors
- 9. Mixer. Two banks of four 60-in agi-
- tating-type cells, each bank driven by two 25-hp. Allis-Chalmers motors

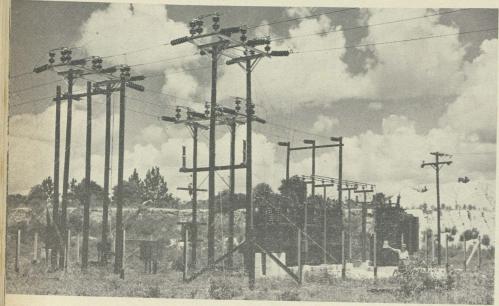
 10. Six banks of four 54-in. Type M.S. Air-Flow cells, each bank driven by two 15-hp. Allis-Chalmers motors. with V-belts
- 11. 30-ft. Dorr thickener; 3-hp. Louis-Allis motor and Falk reducer
- 12. 6-in. G.I.W. top-discharge centrifugal pump; V-belt, 30-hp. Allis-Chalmers
- 13. Agitator. One bank of four 60-in agitator-type mixers; V-belt, two 25hp. Allis-Chalmers motors
- 14. 25-ft. Type FX quadruplex Dorr bowl classifier. Rakes driven by 25-hp., and bowl by 7½-hp., Louis-Allis motor with Falk reducer

- 15. Four banks of six 54-in. M.S. Air-Flow cells, each bank V-belt driven by three 15-hp. Allis-Chalmers motors
- 16. Six banks of 6-pocket Dorr Co. Fahr-
- enwald Sizers 6-in. G.I.W. top-discharge centrifugal pump; V-belt, 40-hp. Allis-Chalmers motor
- Two bins, total capacity 450 tons
- 0-ft. Dorr duplex classifier; V-belt. 10-hp. Allis-Chalmers motor
- 5 x 16-ft. rotary mixer; 15-hp. Allis-Chalmers motor and Falk reducer
- 24-in. Republic belt elevator, 10 x 18in. Link-Belt buckets, chain-driven from 25-hp. Allis-Chalmers motor and Falk reducer
- One master distributor, three partitions. Deister Concentrator Co. Also three 5-partition secondary distributors
- 15 No. 6 Diagonal-Deck Super-Duty tables. Deister Concentrator Co.
- 4-in. G.I.W. top-discharge centrifugal pump; V-belt, 7½-hp. Allis-Chalmers
- A-frame Allen-Sherman-Hoff Hydro-Seal pump; V-belt, 5-hp. Westinghouse
- 5-in. G.I.W. top-discharge centrifugal pump; V-belt, 10-hp. Allis-Chalmers
- 27. This and No. 19 are the same classifier 28. 12-in. G.I.W. bottom-discharge cen-
- trifugal pump, direct-connected to 200hp. G.E. motor
- 30-ft. Dorr thickener: 3-hp. Louis-Allis motor and Falk Motoreducer 6-in. G.I.W. top-discharge centrifugal pump; V-belt, 40-hp. Allis-Chalmers
- Five bins, total capacity 1,500 tons 8-in. G.I.W. top-discharge centrifugal
- pump. Direct-connected to 65-hp. G.E. motor

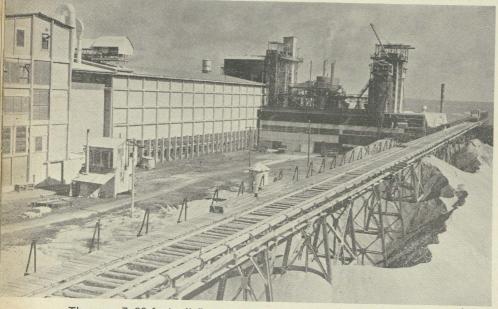
^{*}B.P.L. or bone phosphate of lime is the term customarily used in the industry, to express the content of tricalcium phosphate or Ca3 (PO4)2. Percentage B.P.L. divided by 2.185 gives percentage P205.

^{*} E. & M. J., Sept. 1940, pp. 52-54 inclusive.

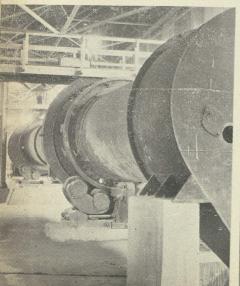
Substation belonging to Florida Public Service Corporation. Here the power purchased by International is stepped down from 66,000 volts to 11,000. Subsequently it is stepped down to 2,300 volts in the mining company's own substation. Use of capacitors gives almost unity power factor.

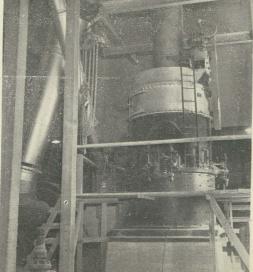


International's grinding plant, dry storage bins and mill, at Mulberry, as they appeared when the recent work of installing additional equipment was under way. Seen from the wet-storage trestle.



The new 7x80-foot oil-fired rotary dryer, addition of which has increased drying capacity by 60 percent (left). This new Raymond mill and air separator, (right), recently installed in the grinding plant at Mulberry, is said to be the largest one used on phosphate rock.





up by a 12-inch centrifugal pump and sent to the washer. Now the matrix is dug by the dragline and piled on the edge of the bank near by. Here the freshly dug, well-broken-up material is sluiced into a sump in the bank by two Georgia Iron Works guns with 2½-inch tips discharging water at a nozzle pressure of only 65 pounds or thereabouts. The line supplying the giants is of 14-inch Spiralweld pipe. Efforts are made to synchronize the use of the guns in delivering matrix to the sump so as to make the flow to the plant as uniform as possible.

From the sump a 12-inch G.I.W. pump, mounted with its motor on the conventional "pitcar," sends the matrix to the washer through a 14-inch Armco pipe line. Maximum pumping distance for one pump is 1,600 feet, and boosters are used in the line as required. As yet the mining at the Peace Valley unit is close to the plant and only one pump is required.

Among the advantages of this dry mining is that it requires four men, whereas the hydraulic mining required 10 to 12. It is no longer necessary to maintain a ditch system in the pit. The hydraulic pipe line, which serves the giants and the matrix line which runs from the pump to the washer do not have to be carried down into the pit but are run along the surface on the edge of the bank to serve the pitcar and guns as these are shifted ahead by caterpillar tractor and sled as mining advances. Less power is also required. Water is used under much lower pressure, although in the same volume as in hydraulic mining, this water being an important factor in helping to break up the matrix and free the slime. Lighter pipe is also required for the hydraulic line. Because of the low pressure and mine pumping head, less power is required.

Two draglines serve the Peace Valley mine, both of them electric, full-revolving and of the track type. Stripping is done with a Model 360 Marion, having a 9 cubic yard bucket and a 150-foot boom. Matrix is dug with a Type 175 Bucyrus-Erie machine equipped with a 5 cubic yard bucket and a 125-foot boom.

As elsewhere, matrix and overburden both vary here in thickness. The average depth of each, however, on the Peace Valley tract is 12½ feet or 1 to 1.

Washing of the phosphate rock and the subsequent treatment of the finer sizes by flotation are explained in the accompanying flowsheets, Figs. 1 and 2 respectively. The washer is designed to handle a minimum of 350 to 450 cubic yards of matrix per hour. The undersize (—3/64 in.) from its flat screens and —1 mm. undersize from its vibrating screens go to a 40-foot hydroseparator at the head of the flotation plant, which is known as No. 6.

(Continued on page 23)

FLORIDA HIGHWAYS

May Emancipate Women . . .

EMANCIPATION OF married women in Florida, now prevented by law from making business contracts, will be a first objective of Mary Lou Baker, second woman ever to serve in the Florida legislature, when she takes her seat in the house of representatives next April.

Miss Baker uses her maiden name in her law practice in St. Petersburg and in her political activities. She is the wife of First Lieut. Seale H. Matthews, U. S. Army, and the daughter of Lee L. Baker, member of the Clearwater law firm of Baker and Ulmer. She defeated Rep. Stanley Minshall, St. Petersburg, by 2,010 votes in the last election.

A second objective of Miss Baker as a member of the legislature will be a correction of the laws on marriage and divorce which, she declares, are as obsolete as the dodo insofar as they meet present conditions.

Take the matter of alimony, for instance. Miss Baker says alimony ought, perhaps, to be an incident to the beginning of marriage rather than of its destruction.

The pompous, insincere phrase, "With all my worldly goods I thee endow," she thinks, ought to be stricken and a sincere promise made by each to share with the other.

Such things as dower, actions for breach of promise and for alienation of affections, she contends are all outmoded and have no place in modern society.

"The woman is a person, a human, as much entitled to transact her business as the man is to transact his," she says, and adds further that "each deserves the right to possess and to exercise personal independence, individuality and liberty."

Medical examinations and blood tests are advocated by Miss Baker before issuing a marriage license. She takes the position mental and physical health should always and everywhere be required and in this connection she says it should be kept in mind that the United States has 796 cases of syphilis per 100,000 of population as against Sweden's 7 to 100,000.

But it is the divorce traffic and its causes with which Miss Baker is most concerned. Among the causes of divorce, as she sees them, are failure of schools and colleges to give better training for marriage; early marriages, made before the parties have attained sound discretion and emotional control; and the prevailing poor economic conditions.

But the obsolete laws laws on both marriage and divorce make matters worse, she says.

"The streamlined model bride of today is not the same in her demands as the harem occupant of centuries ago," she contends. "Divorce law has not kept pace with the science and mechanics of our machine age."

Granting of divorces on mutual consent after three years of marriage, is one of the most radical departures this young woman barrister advocates. She criticizes present laws which require either husband or wife



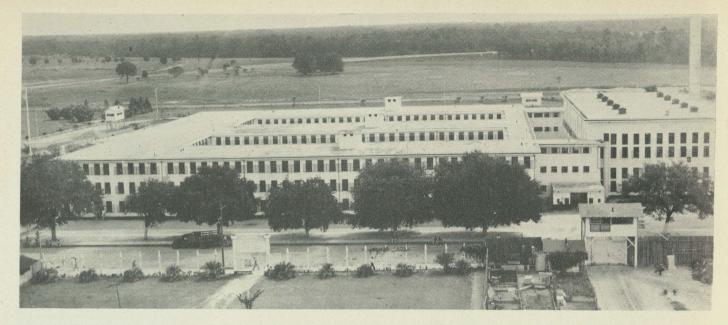
MARY LOU BAKER

second woman to ever serve in the Florida legislature, who will be a member of the 1943 session. Miss Baker, in private life the wife of First Lieut. Seale H. Matthews, U. S. A., is a practicing attorney in St. Petersburg. She has ideas regarding the Florida marriage and divorce laws and a real ambition to emancipate married women, now forbidden to make business contracts in this State.

to make some charge against the other in order to get a divorce.

"At present," Miss Baker says, "the

ground pleaded for divorce is seldom an index to the motives which caused the suit (Continued on page 26)



This is the main building of the Florida State Prison Farm at Raiford where the population has dropped from over 2,000 to about 1,500, due largely to activities of the Florida Parole Commission in giving deserving prisoners a chance to make good. It is here Superintendent Chapman practices his policy which holds that there is a great deal more to a prison than the guarding of convicts.

Diversified Prison Demands . . .

A WARDEN'S MAIL holds many strange inquiries. "Can you sell me a a pure bred Brahma bull calf?" writes a farmer from central Florida who has a small herd of beef cattle in the woods near his farm.

"By today's express I'm sending you two bides. Please tan them on the shares. I need leather to repair barness," writes a tobacco grower from west Florida.

"If you can recommend two negro prisoners who can be paroled, I can give them jobs in my turpentine squad," writes one of Florida's prominent citizens from Green Cove Springs.

"A man was killed in a car wreck near Providence and his people are poverty stricken. Can you furnish a coffin at a low price?" telephones a kind-hearted citizen from a nearby town.

And so the never-ending demands on a prison continue. Demands strange and surprising. Demands as various as the needs of humanity. A prison supplying the needs of people! A prison a source of supply!

Well, a prison has two sides. One is that of maintaining discipline and securing rehabilitation where possible. The other is that of production. Now the law forbids the sale of goods manufactured by the prisoners. So in recent years the labor of prisoners has been turned in the direction of helping the citizens of the State in any method possible under the restricted circumstances of prison life.

Take the beef cattle problems as an example. This industry under the leadership of Hon. Nathan Mayo. Commissioner of Agriculture, has become one of the leading industries of the State and undoubtedly has a great future. The two main problems are those of winter pasture and pure-bred breed-

L. F. Chapman

Superintendent Florida State Prison Raiford.

ing stock. The prison therefore has devoted itself to these two features and has found that the best winter pastures for the usual piney woods is carpet grass planted among the pine trees.

At the prison on thousands of acres the pines have been thinned out to ten to fifteen feet and carpet grass started after the wire grass has been plowed under. It has been found that this grass grows readily under these conditions and thus two crops are raised: A crop of beef cattle and a crop of pine timber. Both are profitable in the extreme.

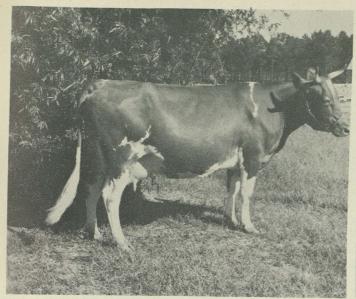
The prison maintains one of the only two or three pure-bred Brahma herds in the southeast and the bull calves are sold at cost to cattlemen over the State so that this srain can be widely used by our citizens. This has been a service of the highest magnitude. Many cattlemen—especially the owners of smaller herds—have been able to secure pure-bred stock who otherwise might never have had this advantage. Indeed we now have a waiting list far greater than can be filled in the next three years.

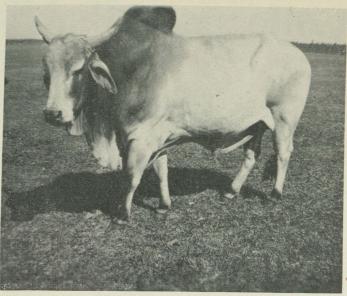
It has been necessary to close the tannery for the duration because chemicals cannot be secured. Some of these chemicals come from other lands and are not available. Other chemicals are needed in the munitions factories, so we are out of luck until Schickelgruber and Hirohito are plowed under. When that important task is concluded successfully, our tannery will be opened again and the prison will resume the service of supplying the farmer of the southeast with leather for wide use on the farms for repairing harness, making bottoms for chairs, hinges for the chicken coops and the thousand other uses to which leather is put on the farm.

About three thousand acres are now improved in the beef herd department and the prison herd has been built up by selection of the best calves so that there are about seventeen hundred head of grade cattle in the herd and the prison has sufficient beef supply for the kitchen for seven months in the year. In time the herd will be large enough to supply the kitchen throughout the year. After that the prison will begin to supply other State institutions so that the burden on the taxpayers will not be so heavy.

Through the years the supply of foodstuffs has been increased until now the prison supplies all the syrup, dried beans and fresh vegetables that are used by the prison itself and so far as the first two products mentioned all that the State Road Department camps, the State Hospital, the Boys School and the Farm Colony need. This is a great help in maintaining these institutions and helps mightily in the relief of the State treasurer in finding funds by which these institutions can be carried on.

The prison has a splendid dairy. The herd is mainly registered Guernsey cattle. No milk or cream is sold but the prison is supplied with all that is needed and the herd provides pure-bred breeding stock for dairymen in the State. At the last Tampa Fair, a bull from the prison dairy won Sweepstakes—the top prize offered for the finest dairy animal.





Here are two of the inmates of the State Prison Farm who have not been convicted of a crime. On the contrary they are the best of citizens—one a native and the other naturalized. On the left is a pure-bred Guernsey cow, one of the registered herd that provides breeding stock for Florid dairies (background shows fine stand of carpet grass and pine woods.) On the right is a pure-bred Brahma bull. The prison maintains one of the only two or three pure-bred Brahma herds in the southeast and bull calves are sold at cost to cattlemen over the State. One of the Raiford bulls won Sweepstakes at the last Florida Fair at Tampa.

Thus the prison devotes itself to the task of doing what it can to help Florida solve some of its problems and thus prevent the utter waste of the manpower incarcerated It is good to say that the prisoners themselves take a keen interest in all this. They seem proud to be able to do something for Florida. At Belle Glade Prison Farm it has been found that ramie, a new fibre product, can be grown successfully. A prisoner at Raiford devised the best machine we know for the separation of the fibre from the stalk. Nothing more can be done about this until the war ends, because the mills in the north are devoted to war work. When peace comes and the mills can install machinery for the processing of ramie, we believe that this new industry will take a place of great importance in Florida.

So I repeat there is a good deal more to a prison than that of mere guarding of prisoners and the Florida prison is doing what it can to help Florida solve some of the many problems which confront a growing and diversified modern State. Strange as it may appear, certain benefits can be had from so unpromising a source as a prison.

COMMITTEE IN STUDY OF CHILD WELFARE

Florida's needs for child welfare are being studied by a committee of 38 civic leaders of the State which will present proposed legislation to the session next April.

The committee, appointed by Governor Holland, members of which will serve without pay, follows:

Dr. A. W. Newitt of the State Board of Health, Jacksonville; Dr. W. W. McKibben of Miami, representing the State Medical Association; Dr. Edgar L. Morphet of Tallahassee, the State Department of Education; Juvenile Judge Paul Kickliter of Tampa, the State Probation and Parole Association; Mrs. Ann Carson Dunaway of Miami, the State Defense Council.

Mrs. Malcolm McClellan of Jacksonville, the Florida Congress of Parents and Teachers; E. R. Vaughn of Jacksonville, the American Legion; Judge Walter H. Beckham of Miami, the State Bar Association; Mrs. A. L. Buzzell of Coconut Grove, the American Legion Auxiliary; Judge Chester M. Wiggins of Bartow, the County Judges' Association; Dr. John M. McLachlan of Gainesvile, Ray V. Sowers of Jacksonville.

Judge W. S. Criswell of Jacksonville, Judge J. E. Peacock of DeLand, George T. Shannon of Tampa, Marcus C. Fagg of Jacksonville, Mrs. Hollis Rhinehart, Jr., of Miami, Dr. Gilbert S. Osincup of Orlando, Mrs. R. B. McIver of Jacksonville, Millard Davidson of Marianna, Mrs. Lola C. Skipper of Ocala, Stanley C. Myers of Miami, Dr. M. Bristol of Gainesville, Mrs. Willis M. Ball of Jacksonville, Mrs. W. M. Pepper, Sr., of Gainesville, Miss Jessie P. Miller of Bradenton, Mrs. Ellen Whiteside of Miami.

SWANSON IS APPOINTED ATTORNEY FOR PATROL

Joe Swanson. Perry, has been appointed attorney for the Department of Public Safety to succeed Hugh McArthur, Tampa, who is now a lieutenant in the naval service.

In granting McArthur a leave of absence, Governor Holland and members of the State cabinet, which acts as a board of supervisors for the department, commended his work highly.

Below is the modern dairy at the State Prison Farm, operated wholly by inmates and producing the finest grade of milk from the pure-bred Guernsey herd maintained on pastures which are covered with carpet grass and thinned pine trees, thus promoting at the same time two industries.



Colleagues, Bar Honor Whitfield...

JUSTICE JAMES B. WHITFIELD, designated by his colleagues as "the flower of Christian democracy," stepped down from the Florida supreme court bench this month at the age of 82 years and after continuous service on the court since February 15, 1904. longer by several years than any other Florida justice.

In a ceremony held January 4 the aged justice's long service was recognized by Governor Holland, U. S. Senator Claude Pepper and scores of lawyers and citizens including spokesmen sent by the Florida State Bar Association and other organizations.

"The Bible and the constitution were his guide to moral and legal excellence." said a formal tribute from his six fellow justices, "and from them he extracted his concept of the dignity of the individual. To him the constitution was a living reality to be interpreted by the light of reason as if it were promulgated today. He gave no encouragement to the theory that it was cast in a strait jacket to bind the present by the outmoded philosophy or caprice of the past."

"He has written the record of his accomplishments into the history of this State so that he will be mentioned with affection and respect by future generations," said Governor Holland.

Resolution of the State Bar Association was presented by Tom Gurney, Orlando, president as follows:

"Whereas, the board of governors of the Florida State Bar Association, for and on behalf of the membership of said association. desire to note appropriately the retirement from the supreme court of Florida of Justice James B. Whitfield; and

"Whereas, the said Justice Whitfield has for the past 39 years served as a member of the highest court of this State with unwavering devotion, outstanding ability and high distinction in the cause of justice and right for the people of the State; and

"Whereas, prior thereto he distinguished himself in public service in other positions of prominence and trust; and

"Whereas, in addition to the outstanding service which he has rendered as a public servant, he has personally endeared himself to thousand of friends and admirers, both within and without the membership of the bar of the State, and has established a personal as well as judicial integrity of the highest order; and

'Whereas. Justice Whitfield has high lighted the pages of the jurisprudence of this State with his contributions of learning and research, and with scholarly opinions of an able, painstaking and impartial judge;

"Now, therefore, be it resolved that on behalf of the members of the Florida State Bar Association, we do hereby express our deep appreciation, our sincere gratitude, and our genuine obligation to Justice Whitfield for his long years of labor and accomplishment, rendered the State of Florida and its people;

'That we further acknowledge with our

high esteem and respect the contributions which he has made to the body of our law, and the example which he has set as a jurist, of courage, and of judiciial gailantry, and of modest but firm convictions;

"That we, as members of this association, likewise wish to record berein the pleasure of the personal association and friendship with a character of great charm and courtliness, which has been ours to enjoy through these years, and which the gap between the bench and the bar has never seemed to disturb:

"That the supreme court, now in session. be requested to enter this testimonial of our respect and high esteem, and our sincere affection for Justice Whitfield, upon the minutes of the court and that it be spread upon the minutes of this association."

Justice Whitfield did not seek reelection in 1942 and was succeeded by H. L. Sebring. Gainesville, former judge of the eighth judicial circuit of Florida and a former football coach of the University of Florida. He will continue to live in his home across from the State capitol.

JUSTICE WHITFIELD EXPRESSES HIS GRATITUDE TO PEOPLE OF FLORIDA

In acknowledging tributes paid to him and to his long career as Justice of the Florida supreme court, Justice James B. Whitfield made the following statement to his former colleagues and to the people of Florida:

"I am deeply grateful for this manifestation of your good will. Happy memories of this impressive occasion will be cherished by me to the end of my life.

"The people of Leon County and of this State excel in generosity and forbearance. They have been exceedingly kind to me, for which I am and shall continue to be profoundly thankful to them.

"To be called to render any public service is an honor in itself. To be authorized to participate in the exercise of the judicial power of the State is indeed a very high honor and a very great privilege.

"If in the course of my service I have aided in accomplishing anything beneficial to this State, I have only done my duty. For the privilege and opportunity given me to serve, I am forever indebted to the people of Florida.

"For this demonstration of your approval I extend to you individually and collectively my sincere thanks with assurances of my appreciation.

"To the members of the court, to the members of the bar committee, to the members of the State and county bar associations, to those who have spoken so generously of me, and to all present, I return many thanks for the great honor you have conferred upon me today.

"To all who are here and elsewhere in Florida, I express my very best wishes for all the good fortune life can afford in our greatly and rapidly growing State.

"To our governor, I extend most cordial greeting and thank him for his presence and his participation on this occasion. To Mr. Justice and Mrs. Sebring, we all extend a hearty welcome and every good wish as residents of Florida's capital city.

"To the members of the court, I express my hearty appreciation of their uniform courtesy to me. Our association has been most delightful to me and I wish for each of them every honor and distinction in rendering service to the State.

"I commend the officers and attaches of the court for their fidelity and efficiency.

"Finally I desire to say to the people of Florida who have done so much for me that I am truly grateful to them."

Financial Condition Good . . .

Suspension of horse racing in the State, meaning the loss of an anticipated \$30,000 for every county in the State, and seriously affecting old-age pensions and teachers' salaries, presented a new problem for State officials this month, despite the fact that the State entered the month on a sound financial basis. Racing was suspended following OPA's order against pleasure driving of automobiles.

IN WHAT HE termed "a report to the people of Florida," Governor Holland started the second half of his administration this month with a statement that the State should come to the 1943 legislature with bills paid and "without any critical problems requiring hasty action."

That paperhanger turned crepehanger-Hitler, may be held responsible for any shortage in State funds which may come up between now and the opening of the biennial lawmaking and revenue-raising session. War already has trimmed the gasoline tax revenue seriously, but there has been a corresponding reduction in expense cared for from this fund insofar as the State Road Department is concerned. Receipts from this tax going to the State Road Department and the highway bond retirement fund fell off \$5,526,000, and those going to the general revenue fund and school fund dropped \$921,000 in the first 11 months of the year. Documentary stamp tax skidded from \$822,000 in 1941 to \$578,000 in 1942. The State ad valorem tax which formerly brought in some \$1,700,000 per year is entirely missing, while the gross receipts tax amounting to \$2,000,000 a year also has been wiped off the revenue lists. Receipts from the tax on racing have dropped about 30 percent; however, old age pensions, paid from this source, have been budgeted through May.

An advance payment of utility taxes not due until February by the Florida Power and Light Company, Florida Power Corporation, Florida Public Service Company and the Tampa Electric Company, amounting to \$250,000 has helped to keep various departments out of the "red" and cash on hand at the end of the year. The increase of \$5 on most passenger car licenses has partially offset the revenue slump caused by the laying up of cars for the duration and the increase in beverage tax revenue is helping to offset decreases in other revenues.

In reporting the excellent financial condition of the State despite decreases in many revenue sources, Governor Holland gave much credit to the comptroller's department for the collection of delinquent and current taxes and to the rigid economy practiced by all members of the cabinet. He gave particular credit to the State Road Department which came through the year with a cash balance of \$1,500.000. This department, he said has reduced its overhead operating costs from

30 to 40 percent despite the fact that it has, at the request of the U. S. Bureau of Public Roads, gone ahead with the preparation of plans and specifications of new highways to be constructed after the war as a part of the Federal and State employment programs.

The governor also praised the work of Boyce A. Williams, head of the Florida Industrial Commission, which raised its unemployment compensation pool from 12 to 20 millions during the first half of his administration, declaring that this fact offers a substantial degree of security against heavy unemployment which may come following the war.

With the first of the year the State Board of Administration, composed of the governor, treasurer and comptroller, assumed control of the \$170,000,000 county and district road and bridge bond debt, thus taking the load off of county property owners. This debt will be paid off by the board from two cents of the gasoline tax revenue which will be set aside for that purpose, and for the further improvement and construction of State and county highways for the next 50 years. It was estimated, during the campaign for passage of the constitutional amendment providing for this method of relieving county property owners of this burden, that the revenue from the measure would amount to some \$300,000,000 enough to pay all of the county road and bridge bond indebtedness and leave some \$130,000,000 for the improvement of existing roads, freeing of toll bridges and construction of new highways.

The State Board of Administration set up operations February 15, 1930 and, with gasoline tax and supporting property taxes in some counties and districts, \$123,875,000

of bonds principal and interest was retired in 12 years.

Some counties were still having bond troubles, because their proportionate share of gasoline tax was not enough to pay their bonds without heavy local property taxes.

Governor Holland proposed his constitutional amendment, and he said it would settle the bond problems and remove the gasoline distribution plan from legislative bickering.

The people overwhelmingly approved when they got the chance in November to vote on the amendment.

The constitution now authorizes the Board of Administration to issue refunding bonds if gasoline tax credits immediately due to a county are not sufficient to pay that county's bond obligations.

The refunding bonds can be spread over a maximum not extending beyond 1993. If one county has more on hand than is immediately required, the surplus can be invested, at three percent interest, in the maturing obligation of some other county or district to prevent defaults.

If there is a surplus in the two-cent gas tax above the bond requirements, the difference—estimated at \$130,000,000 for 50 years—will be used for highway work. Eighty percent of this surplus will go to the State Road Department for State road work and 20 percent will go to the counties for county road work.

In addition to this, the State Road Department still has the revenue from four cents a gallon of gasoline tax for building and maintaining highways. Under normal conditions, each cent of gasoline tax produced \$3,000,000 a year.

Sales of rationed gasoline showed an up-(Continued on page 26)



GREAT SOUTHERN TRUCKING CO.

General Office

JACKSONVILLE

FLORIDA

Serves the principal defense projects in the southeast

With County Commissioners

County Commissioner Manuek Sloan, Lake, celebrated his 44th birthday December 30.

Commissioner John Chesnut is chairman of the war bond drive in central Pinellas County.

Preston B. Bird, Homestead, has been named new chairman of the Dade County commission.

Lee County made \$1,269.88 by renting equipment to W. H. Armston & Company in November.

Gulf County is sponsoring experiments in pasture culture being made by County Agent J. B. White.

Okeechobee County commissioners have authorized a 50-cent per day raise to all county road workers.

St. Lucie County has joined counties making a drive to collect delinquent taxes through display newspaper ads.

On recommendation of the Pinellas County commission Al Rogero has been appointed probation officer of that county.

Tax Collector E. B. Wilson, Madison County, reported a 63 percent collection of the total tax roll for November.

Bond of Frank F. Lee, New Smyrna Beach, school board member, was approved by the Volusia County commission.

John G. Miller, Broward County commissioner, has been awarded the Silver Beaver award of the Boy Scouts of America.

DeSoto County commissioners contributed \$100 to the construction of the Arcadia observation post aircraft warning service.

Chairman Joe F. Hammond, Duval, was among welcoming committee for war savings leaders recently meeting in Jacksonville.

Duval County commissioners have collected \$2,160 from the Navy for rental of county equipment on a project near Sanford.

The heating equipment of the Duval County courthouse has been changed from oil to coal burner at a cost of \$1,775 for parts.

Dade County commissioners are considering recommendations that all Dade relief programs be financed by taxes and grouped under the administration of a county welfare board. The recommendations were submitted by Mrs. Hollis Rinehart, Jr., president of the executive committee of the Dade County council of social agencies.

Martin County commissioners have voted pay raises for county road workers from \$2.50 to \$3 per day to meet increased living costs.

Sarasota County is using Manatee County prisoners for work on roads, providing for their maintenance during the time they are employed.

Monroe County commission has two members in the armed service—Harry Harris of Tavernier and William T. Doughtry of the fourth district.

Herbert Latham, Pensacola, has been named county attorney for Escambia County to succeed R. M. Merritt, who is now a lieutenant in the U. S. Navy.

County Attorney D. C. Smith, St. Lucie, has been authorized by the board to negotiate for 800 additional acres for the Fort Pierce airport project.

As an economy move the Hendry County commission has dispensed with the services of D. H. Ward, county agent. His work was declared satisfactory.

* *

Secretary Pelhank of the budget commission has been named mileage administrator for Hillsborough County to affect conservation of tires and gasoline.

Marshall Watkins, Marion County agent. has been granted a leave of absence to join the armed forces. He is taking special training at Princeton University.

Dade County commission showed a wartime saving of \$578,333.50 for the 1941-42 fiscal year and set up a saving of \$617,-920 in the 1942-43 budget.

* * *

Citrus County commissioners paid for the reconstruction and moving of a small house from the Inverness city park for use of the air raid warning service.

Gadsden County commissioners have advertised for bids for the painting of the interior of the county jail and authorized repairs to the court house clock.

Dr. Ellsworth Waite has been appointed acting Nassau County physician during the illness of Dr. L. L. Bunker who is in the veterans' hospital in Lake City.

Marion County commissioners have contributed \$100 for the county Boy Scout budget, matching a similar amount contributed by the county school board.

Flagler County commissioners have purchased a plot of land belonging to the Bunnell Improvement Company for use as an airport to be known as Bulow Field.

* * *

County Agent W. Paul Hayman, Polk County, has recommended the employment of an assistant to devote his time to 4-H club work among boys of the county.

Charlotte County commissioners bave agreed with the school board for a raise in salary for the county nurse, Mrs. C. O. Hickok from \$100 to \$130 per month.

* * *

Assistant County Attorney Moody, Hills-borough, has advised the commission that the impounding of stray cattle is a duty of the sheriff and not of the county commission.

Hillsborough commissioners have been advised by Attorney General Watson that they cannot force Acting Sheriff Savarese to list details of every arrest in order to collect his cost bills.

County Engineer W. A. McMullen, Jr., Pinellas, is working on an estimate of the amount of critical materials needed by the county for public works projects for the next year.

By transferring \$4,600 from the general fund to the outstanding indebtedness fund. Escambia County commission ended the year with no outstanding indebtedness except to fee officers.

Dr. R. J. Shale, director of the Hills-borough County health department, recently turned back \$725 to the county commission. It was left over from a rural sanitation project.

Pinellas and Hillsborough County commissions are discussing a third bridge across Tampa Bay following the freeing of the present spans. It would aid employment after the war.

D. M. Prine, Fellowship, heads the Marion County soil conservation committee for 1943. Other committeemen are C. M. Matthews, Flemington, Jacques Waller, AAA, and Nat Mayo, Ocala.

Santa Rosa County has rented its dragline equipment to Falk & Coleman and it is being used to build the new air base at Key West, traveling almost the entire length of the State to get there.

Jackson County has declared an open season on netting suckers in Compass Lake and Ochessee Pond to close February 15. The move was taken to eliminate enemies of bass and other game fish.

* * *

The Pinellas County home farm operated at a profit of \$1.02 in November. The farm furnished 20 dozen eggs, 1,085 gallons of milk, 843 pounds of pork, sweet potatoes, peppers, peas and tomatoes to the home. Employes of the home purchased \$183.50 in war bonds during the month.

St. Johns County commissioners recently refused to settle a delinquent tax note by Palatka officials on a 35 percent basis and turned the matter over to the State Board of Administration which settled on a 40 percent basis, netting an additional \$113 for the county.

Commissioner Henry Belcher, Pinellas, was dubbed the "agricultural commissioner of St. Petersburg" in a recent broadcast of the Farm and Home Hour (Chicago) when C. E. Donegan, Pinellas dairyman was awarded a certificate of merit in recognition of his cooperation with the government in its war efforts.

E. D. Cook, Winter Park, was elected chairman of the Orange board. Rolfe Davis, former chairman, was the only hold-over commissioner. Other commissioners are V. E. Bourland, Winter Garden; J. W. Pace, Conway; Gillen McClure, Apopka. Smith & Fishback replace Campbell Thornal as county attorney.

INTERNATIONAL'S NEW

(Continued from page 16)

The latter will treat 300 tons of feed per hour. Its flowsheet is slightly different from that previously used, being based on some experimentation conducted at Plant No. 2 at No. 92 mine.

Reagents used in the rougher-flotation separation comprise caustic soda, fuel oil and fatty acids. Quantities per ton of feed are approximately as follows: 0.6 pounds caustic, 4.5 pounds fuel oils, and 0.9 pounds fatty acid.

The rougher concentrates after being dewatered are then pumped to an acid wash mixer and thence by gravity to a Dorr bowl classifier for cleaning. The rake product flows to a second bank of flotation machines where certain reagents are added for sand flotation and where a high grade of phosphate is secured with very low insoluble silicate content. The reagents used in this section are sulphuric acid in the mixers and amines and kerosene in the flotation machines.

Both plants of the Peace Valley unit as well as the mine have been running three 8-hour shifts per day and 5 days per week since starting on July 1 last. At the same time operation at the company's No. 122 mine and washer has been reduced to one 8-hour shift 5 days per week, more output not being required. About 100 men are employed at Peace Valley, in comparison with the total of 350 for International's pebble field operations.

Power for this completely electrified operation is purchased from the Florida Public Service Corporation. It is transmitted at 66,000 volts to the utility's substation on the property, where it is stepped down to 11,000 volts. Subsequently, in a substation belonging to International it is further stepped down to 2,300 volts for use in the plant.

The output of the Peace Valley plant is sent to International's central drying and grinding plant at Mulberry, where it may be dried for shipment or dried and ground to specification as required for company or

customer use. Recently a new 7x80-foot oil-fired rotary dryer, which will increase the drying capacity by 60 percent, was added to the two 6x60-foot rotary units in the plant.

Similarly, supplementing the four Kent mills hitherto used for grinding, a new No. 633 air-swept Raymond mill and air separator has been installed. This unit, it is claimed, is the largest of its kind used on phosphate rock. The Kent mills were not designed to have a maximum efficiency at more than 48 to 52 percent minus-200 mesh.

One of the interesting features of this central plant is the grinding of raw phosphate rock containing approximately 31 percent P2O5 to 85 percent minus-200 mesh for direct application to the soil under the AAA soil conservation program for building up pasture lands and preventing soil erosion. At this fineness, about 3½ to 4 percent P2O5 is citric-acid-soluble. Thus the phosphate becomes available for crops.

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FOOD AND PHOSPHATE

(Continued from page 7)

the phosphatic residues of overlying beds and, in places, to be reprecipitations of such dissolved phosphate in open cavities in phosphatic limestone. The thickness of the phosphate beds varies from a few feet to a maximum of 100 feet. The phosphate mineral occurs in a form of rock fragments, boulders, plate rock, in a matrix of sand, clay and soft white phosphate, the hard rock forming up to 25 or 30 percent of the bed . . .

"Phosphate mining began in Florida in the year 1888 with the dredging of concentrations of the mineral from the bed of Peace River. River mining ceased in 1908 or 1909. From 1888 to the end of 1936 the total production of cleaned phosphate mineral has amounted to about 79,500,000 tons. The greatest production was 4,500,000 tons in 1930 . . .

"A few years ago reserves were estimated at 97,000,000 tons of high grade phosphate mineral. Since the introduction of flotation treatment of the fines, which formerly went to waste, they are estimated at some 236,000,000 tons on a basis of 70 percent grade. Areas not formerly considered profitable have been available."

FLORIDA

(Contined from page 10)

preferring to hide its gifts within shadowed swamp glades until man discovers them and frames their native loveliness with other strange and far-off blooms. Magnolias and spider orchids are treasured; red and yellow hibiscus adorn every street and garden, and the oleander's fragrance permeates the soft breezes. Her oaks and cypress are balanced by the various palms and by the plastic, lacy texture of the Australian pine.

So here we have another facet-the invader. And this is characteristic of a land of growth where the colonial South, north of the Suwannee, blends with northern half below, producing a phase of cultural transition. The trailer army, the people on temporary escape from back-home jobs, the multitudes without anchorage, find in this openness, in the opportunism of the land, a complement to their seeking. And these stay and find root, and develop the land just as the red, white, and black mangroves cling tenaciously to the sand flats and also build from the imprisoned mud and branches. Everything here in this last frontier has this quality of irresistible mobility hidden behind a deceptively repressed sky, land and water.

Modern Florida has been created by invasion. Earlier it was the Spanish conquistadores; then the equally daring, more enduring missionaries. leaving their stamp to this day in the baroque, cloistered quiet of St. Augustine and many other localities. The most significant awakening came with the surge of the railroads down the east

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and west coasts, directed by the inimical Henry's—Plant and Flagler. Florida was the new frontier, but this time the railroads led in the taming of the wilderness.

Now a new Florida came into being dedicated to both sides of the industrial coin: Feverish expansion and leisure in an incomparable setting. Great cities sprang up in favor of the twin gods—all had one quality in common: rapid growth. And to Florida came the dreamers, the creators, the toilers, to build their own unique paradises, whether

it be an ornate home overlooking Biscayne Bay, or just a trailer within a sheltered grove.

Following the railroads came the road builders, encompassing the State with a net-

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work of highways, the Tamiami Trail conquering the Seminoles and bringing them out of the Everglades where rifles and force had failed, drawing tight the bands about her length and flinging down the keys in a magnificent highway to the southernmost point in the United States.

Florida's proximity to Central and South America, and to the islands of the Caribbean, have made her one of the foremost States in contact with Latin culture and commerce. From Miami, Pan American Airways radiates lines to the entire southern continent. Tampa is the leading gulf port, and most shipping and cargoes inevitably flow through her. Ybor City, a part of Tampa, has a large Cuban population, and is the center of a cigar industry, adding its spice of Latin food and custom.

Today, when the greatest hemisphere solidarity against Fascist aggression is the clarion need, these contacts furnish an intimate means of drawing the Americas together. Most Florida universities have special courses devoted to the study and cultivation of Pan-American relationships.

Florida's native resources are aiding in the war effort. The flat terrain allows for excellent air fields; her hotels are barracks to thousands of trainees; her pine and pitch make possible a great naval stores industry; and her coasts provide fine harbors for Navy and Coast Guard and air bases for the protection of shipping lanes.

The mingling of all her traditions: the primitive-African and Seminole-the staid colonial, the Latin, the dynamic industrial, has superimposed upon Florida a harmonious diversity of outlook, all united upon the prime concept of freedom of development. Here is cosmopolitanism without the rigidity of sophistication and urbanity.

Perhaps more lasting and indigenous to Florida itself, and providing the raw material for the dreamers in far off States and outposts, are the phenomena made possible by the geography, the waters, the subtropical climate: the miles of alabaster beaches; the gulf and ocean abounding with fish; the cool inland scrub; the year-round warmth; and the citrus industry, filling far markets with the tang of her imprisoned fluid sunshine.

These are the lure of the Florida-bound traveler, and mean to him the essence of the State, embodying its litheness and indolence. Here he means to find a harbor for his

And also here we find the key to our puzzle and ourselves. This is the democratic spirit we all cherish, we all follow. For is this not what characterizes us and motivates us all-this marginality, this flexible growth, this blending, these traditions and transitions, this contradiction and this freedom? For this we fight. We have found it where all pure expressions of a people, no matter how inchoate, are found-on its frontiers.

And so we go forward to destinies with winds sliding around us, with lustrous skies glowing, and the edge of a palm cutting the exploding day as the saffron-gold sunset, turning to brooding mauve, yields to the dark as wings rise and boats set forth over lonely seas to destroy the destroyers. We go forward to strength and peace.



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FINANCIAL CONDITION GOOD

(Continued from page 21)

ward trend during November, the total being but 25.9 percent lower than for the same month last year. November sales totaled 25,246,530 gallons compared to 22,-832,040 gallons in October and 33,618,609 gallons in November a year ago. The tax produced \$1,767,257.

Collections of the beverage department for six months passed the \$4,000,000 mark this month for an increase of \$1,156,644 over the same period a year ago. Receipts since July 1 were \$4,016,220. In the six months the department has paid \$2,626,760 into old-age pensions, \$177,773 for aid to dependent children, \$855,000 into the county school fund and \$120,486 into the general revenue fund.

Tax collectors all over the State reported collections far in advance of other years and there is little indication that there will be a heavy tax delinquency when the legislature takes up its work next April.

The four percent discount allowed for November payments shattered records in almost every county, big and little alike. Dade County collected more than \$2,000,000 in November on its \$5,000,000 roll. Sarasota paid \$299,000 on \$349,000. Marion County broke all records for November payments. Polk's November collections amounted to 28 percent of the entire roll. Manatee County collected more in the one month than for two months last year.

There was considerable delay last year in getting tax rolls ready for payment because of the 1941 legislature's laws requiring all property to be assessed at full cash value. This year, most of the counties were ready for payments on November 1, and in most instances the taxpayers found their bills were a little less than the year before.

The discount allowed for tax payment scales downward from four percent in November to three percent in December, two percent in January, one percent in February. and none in March. If the property owner hasn't paid by April 1, the tax becomes delinquent and penalties and advertising costs begin to accumulate.

Delinquent tax certificates, drawing interest, are offered at public sale, beginning in June. The law provides for delinquency sales to start in June but they may be later because of time required to complete the lists. In past years, many have been as late as September and October. The State comptroller's office said it expected most sales this year would be in June and July.

MAY EMANCIPATE WOMEN

(Continued from page 17)

to be brought. The ground alleged is often a cloak rather than a clue or a revelation. There seems no reason to preserve such fiction and buncombe in our procedure. The chancellor must now strain at gnats to determine whether the slow poison of bitterness is cruelty when no physical blow has been struck, or to determine whether an actual blow was cruelty or a general family fight. The wife who defends herself after receiving one black eye may be refused a decree. Apparently she would have turned the other cheek.

"Of course the court is perturbed by the polygamy-polyandry which the sensationalist pagans of today practice. Yet that court bas little chance to curb such undisciplined laxity because of the stern, unbending statutes. It is known that the record made often is untrue, but it conforms to the Pharisacal law.

"The judge knows both parties are at fault, but the record may not be permitted to show both in their true grav color. One must be painted a glistening white, and the other an intense black. The present procedure is bad reason, bad taste and bad law. It flatters the fools, pleases the perjurers, fights the fair. The judge should be per-

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mitted to exercise authoritative discretion, unburdened by rigid legislative enactments."

The court also should have discretion in the matter of permitting remarriage after divorce. Miss Baker thinks. Under the Baumes act, she points out there is a technical limit to the number of robberies one man may commit. Marriage seems to need a Baumes act, she thinks.

Miss Baker, unlike so many who criticize the present order without offering a better plan, thinks she has a cure for many of the present ills. Among them she lists:

Emancipate married women.

Revoke and abrogate all laws giving dower, and all laws giving a right of action for breach of promise or for alienation of affections.

Put wholesome restrictions on marriage, as to age, health, general fitness.

Revise law as to grounds for divorce, to make them substantially as follows: (A) desertion, (B) cruelty, (C) adultery, (D) incompatibility of temper, (E) imprisonment in State prison or insane asylum, (F) such grave breach of marital duty, dishonorable or immoral conduct, as would disturb the marriage relations to such an extent that the marriage could not reasonably be expected to continue, (G) mutual consent, with the limitation that such consent could not take place until after three years of marriage, nor after 20 years, nor until an agreement approved by the court had been made for the division of property and maintenance of the children.

Give authoritative discretion to the chancellor, not only in the granting or refusing of the divorce decree, but in restricting or denying the privilege of remarriage.

Have the State's attorney or other competent person appointed guardian ad litem of minor children involved in any divorce action.

Modernize generally divorce proce-

Views of Miss Baker, as outlined above, are contained in a dissertation on "The Divorce Traffic; Its Cause and Cure," which appears in the January 1939 issue of the Florida Law Journal. She wrote it while at Stetson in competition for the D. H. Redfearn annual award of \$50 for the best legal dissertation by a Florida law student, including those at Stetson, the University of Florida and the University of Miami. It won the prize.

Also in 1937 Miss Baker won the same prize with her treatise on "Legal Emancipation of Married Women," which was published in the Law Journal of that year.

Miss Baker has been around the legislature before as an attache and will find her work there easier than most representatives attending their first session. She has already formed an opinion regarding the enactment of laws declaring that the consideration of general legislation is trifling as compared to the undue attention often given by legislators to the enactment of special legislation to serve specific cliques.

One of her presession declarations is opposition to a sales tax.

"In my political life," she says, "I wish to be known for my aliveness, my sensitivity to life in others and the elementary clair-voyance to believe that the human mind is equal to the human problems. Always I shall try to be people-minded. At the present, the people oppose a general sales tax. Therefore, I do not favor the proposed two percent general sales tax."

Miss Baker holds a law degree from Stetson University which she entered following work at the Florida Southern College which included a course in journalism under Harris G. Sims, now editor of the Lakeland Ledger. She practices in St. Petersburg and proudly boasts that she made her office rent the first month. The first woman representative was Mrs. Edna G. Fuller of Orlando, who served in the 1931 session.

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FLORIDA FOURTH ESTATE

(Continued from page 8)

is now engaged in a program which, it is expected, will be State-wide before long. Three other counties are also following the same plan which involves a modern advertising program, listing the bargains available not as unfamiliar legal descriptions but as definite name places known to local residents with the price asked. To date something over \$4,000 in delinquencies have in this way been redeemed.

"Plans were shaping up today as suggested by Ed Kummer for the organization of a local pool, which would buy in delinquent certificates and obtain tax deeds thereon for later resale or redemption. The investment is protected by either payment of interest ranging from 6 to 18 percent in the event of redemption by the owner or the property itself on a tax deed, which has recently been strengthened by law to provide secure protection to the holder.

"Such a program benefits every taxpayer and puts the delinquent in no more jeopardy than he is already through nonpayment of taxes. He doesn't have to pay a cent more for redemption than he would have to pay whether or not any such plan were in operation. The program takes the State and county out of the real estate business and places such activities in the hands of private investors.

"The delinquent tax bill of this year is added on next year's bill, so that the property holder who paid his taxes this year is penalized next year to the extent of the failure of others to pay. This is an upward spiral which continues year after year unless some measures, such as the present program, are adopted. During past years delinquent taxpayers have been wont to raise the cry of 'tax sharks' against the buyers of delinquent certificates, when various outside companes bought them up. Nothing of this sort can be charged against a pool of local taxpayers who are acting merely for their own protection, since penalties for delinquency have already been occurred and must be paid either to the State or to the purchaser of the certificate from the State.

"The meat of the whole program is the validity of the tax deed, which is said to be entirely sufficient now under the law to establish complete control of the property involved. Thus the investor has ample security for his investment, since the properties are acquired for but mere fractions of their actual value in most cases.

"A pool of taxpayers is operating in Hillsborough County, with considerable success, it is stated. The pool is enabled to block out formerly isolated pieces of property, thereby making them marketable and through real estate agents realize upon them, whereas as they existed in isolated parcels, they had little appeal.

"The indications are bright that following the war, Florida property will soar. It has been steadily increasing for the past several years, although the rises have not been so spectacular as to attract general notice. Still the trend has been upward and it is likely to be much more marked, when things return to normal again for the reason that thousands of persons are becoming better acquainted with Florida and its opportunities, through the expanded service training programs going on all over the State. When the oppportunity presents, many of these will return to the State to take up their residence, so a local move to organize a pool would be a farsighted venture and one which could not help at the same time to be profitable.

"If there are any bugs in the plan of the county commission on collecting taxes they aren't evident. The program marks the first time that an intelligent approach has been made to tax collection problems and in addition to the benefits of lower taxation. more money for schools and county purposes is the considerable reduction in the costs of the annual publication of delinquent taxes which will ensue."

Driving is more dangerous 30 minutes after a rain starts than after an all-night downpour. The reason: In the first 30 minutes the water mixes with oil on the pavement and causes a slippery film to form. After a hard rain this is washed away.

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MOTOR ACCIDENT EXPERIENCE

(Continued from page 3)

CONDITION OF VEHICLES—

	Accie	dents
	Fatal	All
Total defects	6	49
	-	
Defective brakes	1	18
Headlight out or defective	2	6
Other lights or reflectors defective	1	1
Steering gear defective		10
Puncture or blowout	1	6
Worn smooth tires		2
Other defects	1	6

Accidents

PEDESTRIAN ACTION—

	Fatal	All
Total accidents	12	51
	-	
Crossing at intersection		7
Crossing not at intersection	5	14
Coming from behind parked cars	1	1
Walking in roadway with traffic	2	20
Walking in roadway against traff	fic 2	2
Standing in safety zone		1
Playing in roadway	1	3
Not in roadway		2
Not stated	1	1

U. S. service men were involved in one accident out of every six reported to this department. Of the 61 reported accidents in which they were involved only 21 military vehicles were involved. This leaves 40 accidents in which service men were driving privately owned vehicles. The seriousness of this particular problem cannot be overemphasized in view of the fact that during the month of December 7 service men were reported killed and 50 injured in traffic accidents.

Everything that is done to reduce these accidents is an aid in winning the war. Let's concentrate on doing our part on the "home front" so these boys can do theirs on the other front.

There were 106 U. S. service men involved in 61 reported accidents in which seven U. S. service men were killed and three civilians killed. 50 service men were injured.

	—A	cciden	ts—	No.
	Total	Fatal	Injd.	Dead
	370	32	148	36
County		_		_
Alachua	5	1	3	1
Bay	5		3	
Bradford	4	1	1	1
Brevard	4		2	
Broward	14	1	5	1
Calhoun	1		1	
Charlotte	2		1	
Clay	3	1	1	1
Columbia	4		2	
Dade	40	4	18	4
DeSoto	2		1	
Dixie	1			
Duval	93	1	35	3
Escambia	9	3	4	3
Flagler	3		1	
Franklin	2 -			
Gadsden	3		2	
Gulf	2			
Hamilton	2		1	
Hernando	1		1	
Highlands	4		3	

Hillsborough	27	6	13	6	
Holmes	2	1	1	1	
Indian River	1	1		1	
Jackson	1		1		
Lake	3		2		1
Lee	5	1	1	1	
Leon	8		5		
Levy	1	1		1	
Madison	1				1
Manatee	3	1	1	1	1
Marion	3	1	1	2	1
Martin	2				1
Monroe	7		1		
Nassau	1		1		-
Okeechobee	1		1		
Orange	33		9		
Osceola	2		1		
Palm Beach	17	4	7	4	
Pasco	1				
Pinellas	3				1

-	D !!				
6	Polk	5	1	1	2
1	Putnam	1		1	
1	St. Lucie	4		2	
	Santa Rosa	4		2	
	Sarasota	2			
1	Seminole	3		1	
	Suwannee	2		1	
1	Taylor	3	1		1
	Union	3	1	2	1
1	Volusia	13	1	5	1
2	Wakulla	2		2	
	Walton	2		1	

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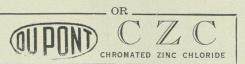
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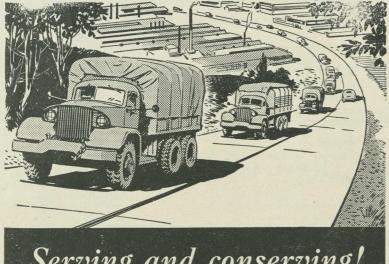
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